

自主封測 品質把控 售後保障

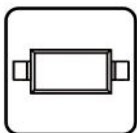
WEB | [WWW.TDSEMIC.COM](http://WWW.TDSEMIC.COM) 



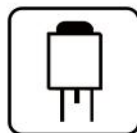
電源管理



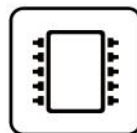
顯示驅動



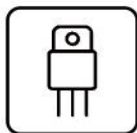
二三極管



LDO穩壓器



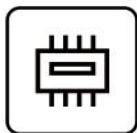
觸摸芯片



MOS管



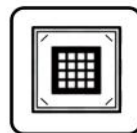
運算放大器



存儲芯片



MCU



串口通信

MMBT3906 2A-TD ( 0.26 )

產品規格說明書

## FEATURES:

- ※ Complementary to MMBT3904
- ※ Collector Current:  $I_c=200\text{mA}$

## MARKING:2A

### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	-40	V
Collector-Emitter Voltage	VCEO	-40	V
Emitter-Base Voltage	VEBO	-5	V
Collector Current	$I_C$	-200	mA
Collector Power Dissipation	PC	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	325	$^\circ\text{C/W}$
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~+150	$^\circ\text{C}$

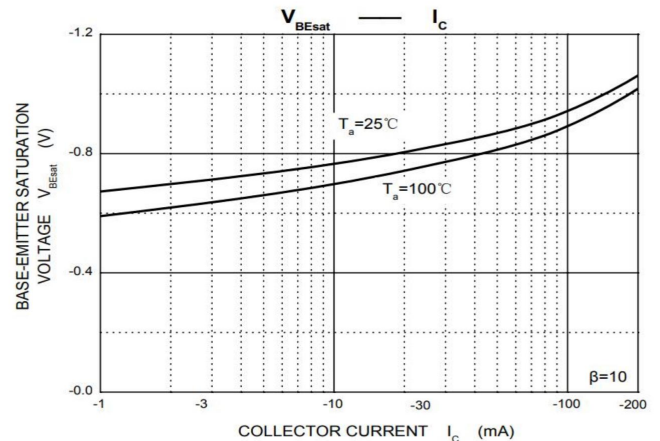
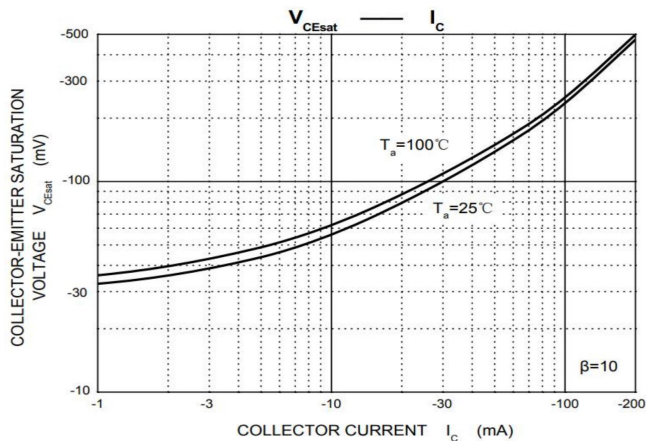
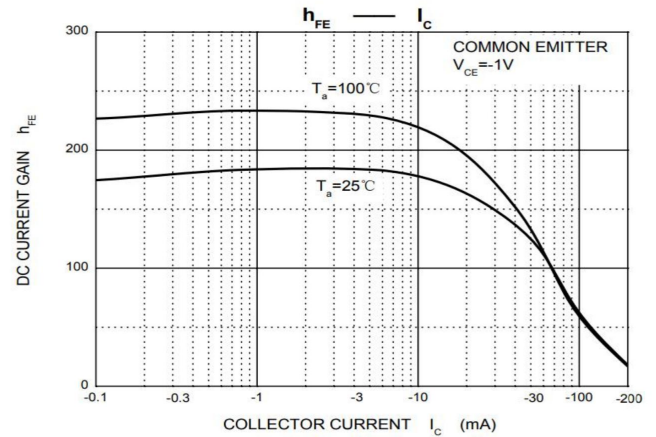
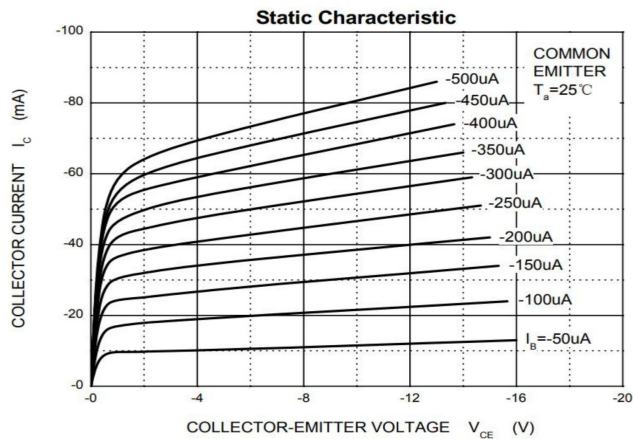
### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$ , $I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$ , $I_B = 0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}$ , $I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -6\text{V}$ , $I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	hFE	$V_{CE} = -1\text{V}$ , $I_C = -10\text{mA}$	100		300	
	hFE	$V_{CE} = -1\text{V}$ , $I_C = -50\text{mA}$	60			
	hFE	$V_{CE} = -1\text{V}$ , $I_C = -100\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}$ , $I_B = -5\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50\text{mA}$ , $I_B = -5\text{mA}$			-1	V
Transition frequency	$f_T$	$V_{CE} = 6\text{V}$ , $I_C = 20\text{mA}$ $f = 30\text{MHz}$	300			MHz
Delay time	$t_d$	$V_{CC} = 3\text{V}$ , $V_{BE} = 0.5\text{V}$ , $I_C = 10\text{mA}$ , $I_B = 1\text{mA}$			35	ns
Rise time	$t_r$	$V_{CC} = 3\text{V}$ , $V_{BE} = 0.5\text{V}$ , $I_C = 10\text{mA}$ , $I_B = 1\text{mA}$			35	ns
Storage time	$t_s$	$V_{CC} = 3\text{V}$ , $V_{BE} = 0.5\text{V}$ , $I_C = 10\text{mA}$ , $I_B = 1\text{mA}$			225	ns
Fall time	$t_f$	$V_{CC} = 3\text{V}$ , $V_{BE} = 0.5\text{V}$ , $I_C = 10\text{mA}$ , $I_B = 1\text{mA}$			75	ns

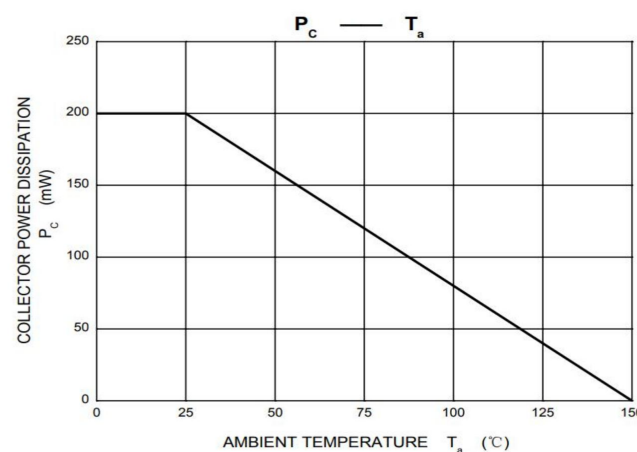
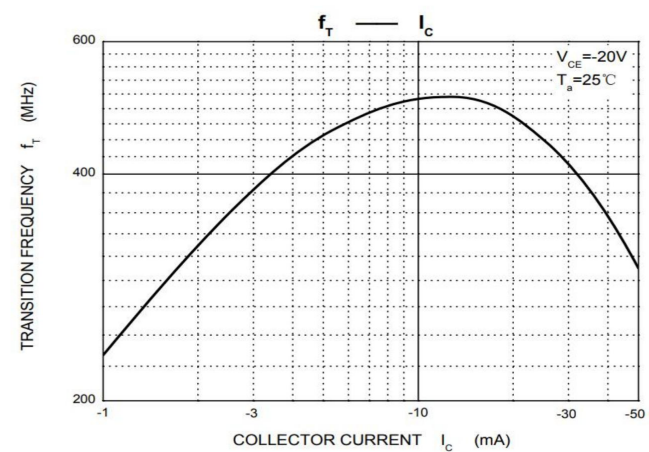
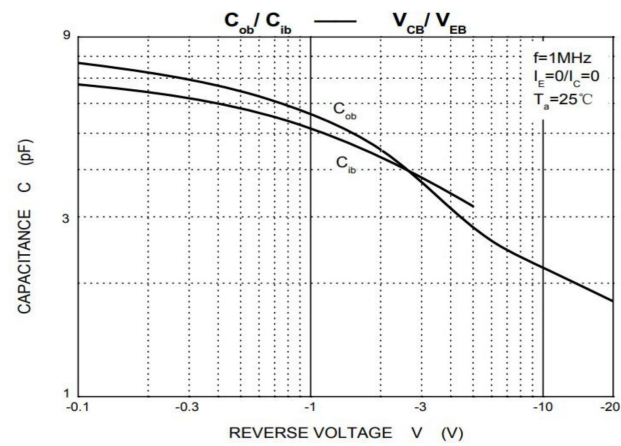
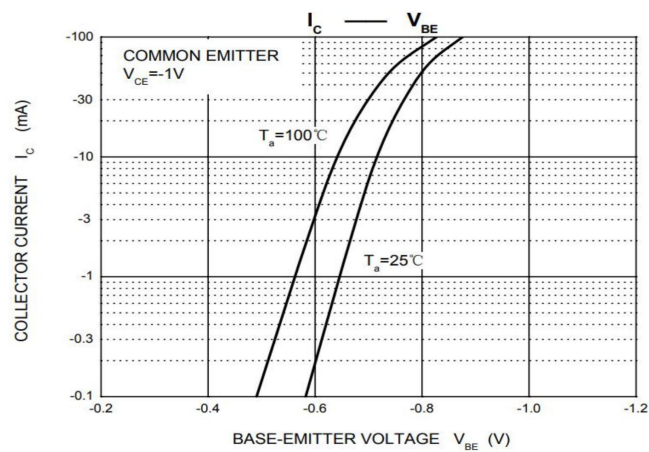
### CLASSIFICATION OF hFE

HFE	100-300	
Rank	L	H
Range	100-200	200-300

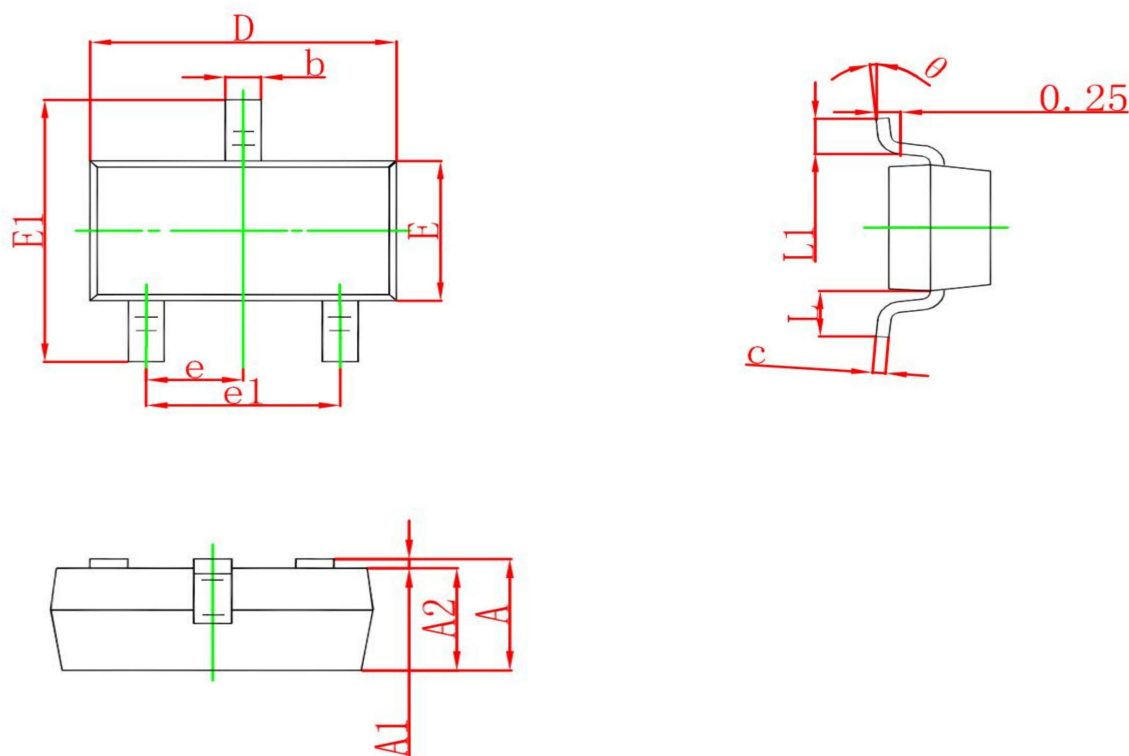
## Typical Electrical and Thermal Characteristics



Typical Electrical and Thermal Characteristics



SOT-23 Package Outline Dimesions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°